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ORIGINAL ARTICLES.

CASE OF QUININE AMAUROSIS; OBSERVATIONS EXTENDING OVER TEN YEARS.[1]

BY HENRY DICKSON BRUNS, M.D., NEW ORLEANS, LA.,

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PATIENT, S. P., white female, aged 3 years, was sent to me by by Dr. H. D. Hanson, of Donaldsonville, La., on September 30, 1886, with the following history:

About September 18, 1886, patient had remittent fever and September 19 five grains of quinia sulphate were given by the rectum every three hours. "No ill-effects being noticed, it was continued until thirty grains had been taken. On Monday she was free from fever and in excellent condition, but was observed to be blind. The pupils were widely dilated and immobile." (Dr. Hanson's letter).

The little one is a fair, blue-eyed, well-nourished child. The eyes have a vacant stare, the pupils being dilated almost to the maximum and responding very slightly to an artificial light concentrated by a lens. The movements of the eyeballs

[1] Read before the Orleans Parish Medical Society.

are not impeded. The ophthalmoscope shows the optic discs to be very white with the vessels, especially the arteries, small and thin. There are no hæmorrhages or other changes in the fundus. A favorable prognosis is given and the use of strychnia sulphate gr. $^1/_{40}$ hypodermatically recommended.

October 2, 1886. Yesterday I thought the pupils a shade smaller, but this was the only change I could detect. To-day the pupils are decidedly smaller and there is undoubtedly light perception. The child shrinks somewhat from the full glare of day, and from my hand swept rapidly before here eyes.

October 3, 1886. Pupils about the same, but I am sure she now recognizes me.

October 4, 1886. Vision about the same; pupils smaller. Allowed to go home.

October 15, 1886. Father of child tells me that her sight came back gradually but steadily; the sight and the pupils now seem to him normal.

November 9, 1886. Dr. Hanson writes to me: "According to request that I inform you as to the final issue of the case of little S. P., whom I sent to you some time ago for quinine amaurosis, I am glad to report that she has entirely recovered. Improvement, which set in rather suddenly, a few days after her return from the city, rapidly progressed to complete restoration of sight."

February 23, 1887. Child was brought to my office today. The pupils seemed a little dilated and the ophthalmoscope showed decidedly pale optic nerves with small retinal vessels, HHAs. The mother says the child holds objects very near to examine them and seems sometimes to have difficulty in finding small objects, but she thinks she noticed all this before the attacks of quinine amaurosis, and believes the child to be near-sighted as both she (the mother) and the father are.

July 3, 1888. The pupils are now certainly larger than normal, about two-thirds of maximum I should say. The optic discs are bluish-white and the arteries small. Vision = finger counting at 20 feet. The mother says she does not think the child's sight perfect by any means.

March 2, 1889. No material change.

March 25, 1891. V., R. and L.$=^{20}/_{LXX}$. Appearances unchanged. She holds her books very near.

June 2, 1892. V., R. and L.=$^{20}/_{XL}$ doubtfully.
June 7, 1892. +1^{s} R. and L. ordered for near.
May 2, 1896. After careful examination (under atropine)
R. + 1.50^{s} ax. 105° ⌒ — 2^{c} ax. 15°;
L. + 1.50^{s} ax. 75° ⌒ — 2^{c} ax. 165°,
are ordered for constant use. With these, V., each eye=$^{20}/_{XL}$, both eyes=$^{20}/_{XXX}$. She can read the finest print when the book is held close—say six inches. The appearance of the fundus is unchanged; the discs are very bluish-white, the vessels small. The pupils may be a third larger than normal, but seem quite sensitive to light.

In this connection it is of interest to relate that I have recently (March, 1895) had occasion to examine the eyes of a gentlemen who was a victim of quinine amaurosis in 1878. He, then a boy of 15 or 16, was ill of yellow fever during the last epidemic of the disease in this city, and was poisoned by quinine therapeutically exhibited.

The blindness was total and the pupils widely dilated. To-day the pupils are not noticeably abnormal, but during examination with the ophthalmoscope they certainly remain more open than usual. I venture to say that there is not an ophthalmoscopist living who, if suddenly confronted with this case, in the dark room, would not pronounce it one in the last stages of optic atrophy. The nerves are blanched—a pale, bluish-white, and the vessels very tenuous. Nevertheless, in a good light, with proper correcting glasses (strange to say he also has a regular mixed astigmatism), this patient reads $^{20}/_{XX}$ readily and the finest print (Sn. No. 1) at the usual distance. I regret I have been unable to measure the fields of vision in these cases. They are doubtless contracted, but the contraction is not enough to make itself felt (subjectively) as an annoyance. Central color perception of red and green is good in both cases.

A CASE OF ENDOTHELIOMA OF THE DURA MATER AND BRAIN.

BY ADOLF ALT, M.D., ST. LOUIS, MO.

[*With Micro-Photographs.*]

ON June 5, 1896, H. M., 64 years old, called on me at the suggestion of Dr. W. A. McCandless, of this city, on account of eye symptoms which, combined with other symptoms, were looked upon as, perhaps, furnishing a clew to the site and possible operability of a cerebral lesion.

My record shows that I found on the right side facial paralysis, exophthalmus, miosis of the pupil and atrophy of the optic nerve, quite far in its progress. The optic nerve of the left eye was hyperæmic. This combination of symptoms made the presence of a basal lesion quite probable.

I never saw the case again, nor heard of it, until Dr. McCandless kindly gave me the specimen, which I shall describe in the following.

With regard to the further history of the case I must refer the reader to the following notes, kindly furnished me by Dr. McCandless:

"Henry Müller was a clinic patient at St. Mary's Infirmary a number of months before he entered the Hospital March 29, 1896. When he first came to the clinic he had pain over right side of face and head,—most particularly over the distribution of the superior maxillary nerve. About the time he entered the hospital, eight months after the first symptoms appeared, there was a beginning paralysis of the facial,—a slightly changed expression of the face, and he could not perfectly close the eye. He complained of pain in and about the eye, also defective vision, with slight indications of protrusion of the globe. We then suspected a tumor of the brain, and he was referred to Dr. Alt for examination. The examination revealed atrophy of the optic nerve, and the exophthalmus was thought to be caused by the paralysis of 'the seventh' nerve or by vascular disturbances. Dr. Henderson also examined the eye

and he thought there must be some pressure back of it to cause its protrusion. Although the patient complained of a disturbed condition of the ear, Dr. Barclay, at about this same time, could discover no indications of disease. Soon the inferior maxillary began to show indications of involvement and increasing paralysis. Then an exploratory trephination was made July 1. The membranes were so tightly adherent, as we approached the base of the skull, and the hæmorrhage so profuse that the operation was abandoned. The wound healed kindly, but the patient's condition grew steadily worse; the

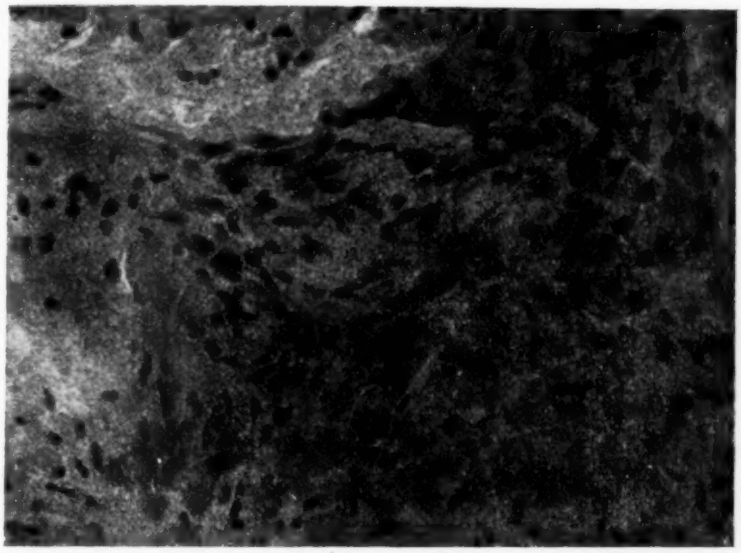

FIG. 1.

paralysis of the muscles, supplied by the facial, and the motor filaments of the inferior maxillary became so complete, that the patient presented a most pitiable aspect. Near the end of his life the pain became very much less; but deglutition became difficult and finally, one week before death, impossible. Patient died July 15, 1896. A post-mortem was made and a tumor revealed, which we were glad to turn over to Dr. Alt, since he had taken great interest in the case."

The specimen which Dr. W. A. McCandless kindly handed to me for examination consisted of the right half of the skull.

The brain was almost all removed excepting a mass of tissue in the temporo-sphenoidal fossa, which was firmly adherent to the dura mater and with it to the bone of the median wall below the sella turcica. The optic nerve, I am sorry to say, had been severed at the intra-cranial orifice of the optic foramen, in front of the chiasma. The eye was in the orbit, its anterior surface had at some time previously been dry. I removed the eyeball and optic nerve carefully for separate examination. Then I removed the cerebral substance, tumor and dura mater from the bone as a whole. This together was about of the size

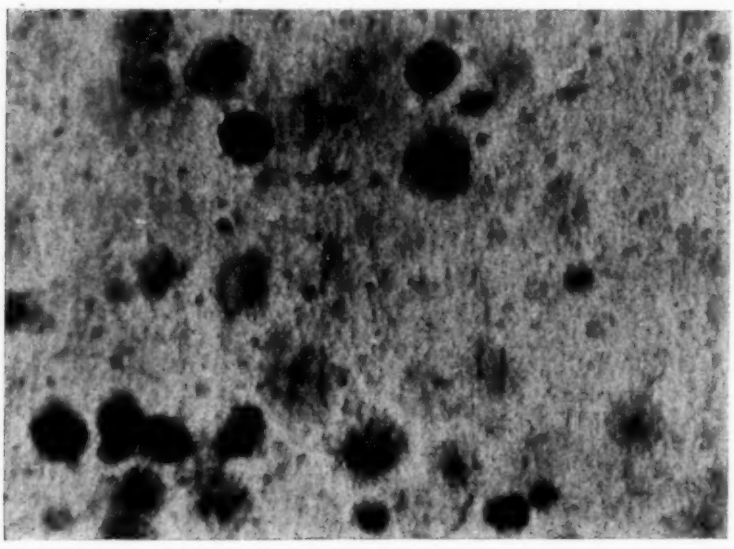

FIG. 2.

of a pigeon's egg or a little more. On cross section the whole mass appeared irregularly lamellated with smaller and larger cavities out of which a dirty, milky fluid escaped. Examination of the skull after the removal of this mass showed that the growth had entered the sphenoid cavity, the pharyngeal vault and the choanæ. As we shall see later on, it had also spread to a small extent through the sphenoid fissure into the orbital cavity. It also involved the origin of several of the cranial nerves. The part of the brain involved corresponded with the gyrus uncinatus and, probably, the gyrus hypocampi.

The origin of the tumor seems to have been in the dura mater. This membrane is swollen to many times its normal thickness. In parts it is firmly attached to the adjacent brain-tissue; here the tumor has spread directly into the latter (Fig. 1). In other parts larger and smaller cavities remain between both tissues which is filled with a grumous, milky substance which easily falls out of the sections.

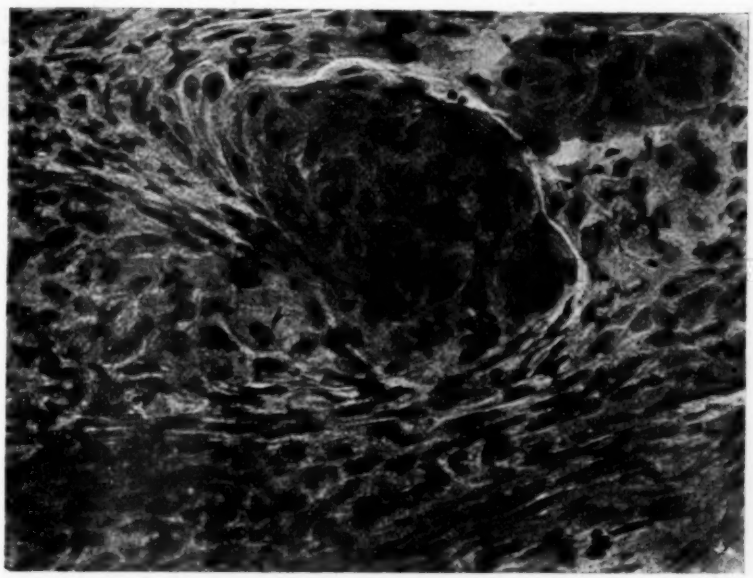

FIG. 3.

With a low power cell-nests and cell-tubules are seen to form the chief parts of the tumor. The tubules spread in all directions exactly as we are accustomed to see in epithelial tumors, but they run particularly along bloodvessels, apparently in their lymph-sheaths. In the brain-tissue, the spreading of the tumor has taken place both directly by contiguity and also indirectly along the bloodvessels. Each one of the latter is surrounded by the elements of the tumor. Where the tumor has entered the brain-tissue and all along in the cortical substance of the portion of the brain examined, an enormous number of round, translucent bodies are seen (Fig. 2), most of which take on a deep stain with hæmatoxyline and aniline dyes.

vary greatly in size and are darker in their centre and the darker, the larger they are. They must be spherical, therefore, and they have the appearance of colloid or arenoid bodies; they are not amyloid, at least they do not take on the stain like amyloid. Some amyloid concretions are also found, but they look quite different. With a higher magnifying power the elements of the tumor are found to be large, sometimes enormously large, flat cells with a roundish or oval nucleus These cells are varying greatly as to shape and size. Some are round, some, where they are closely pressed together as in

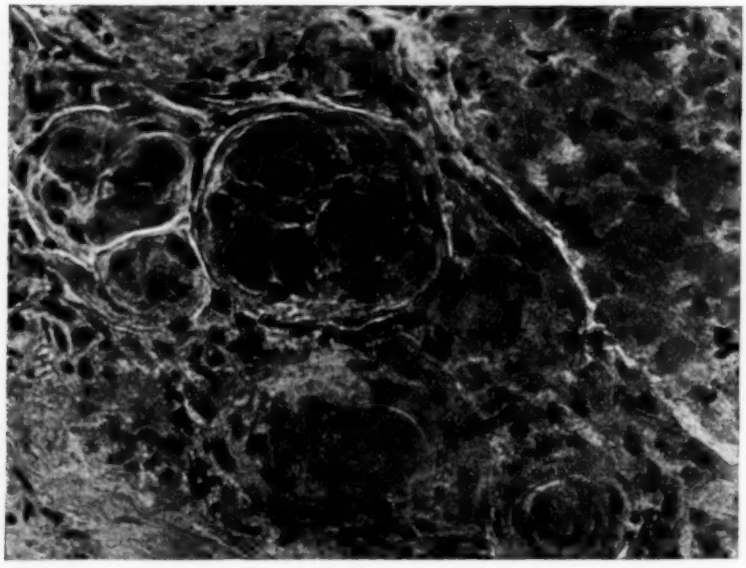

FIG. 4.

the dura mater, are spindle-shaped and bi-polar. They have a great tendency to form pearl-nodules, which sometimes are of an enormous size (Fig. 3). In some of these pearl-nodules the cells are undergoing a colloid or arenoid metamorphosis, or perhaps an amyloid one. In ther parts the closely pressed cells have retained their round shape but their protoplasma is dim and the nucleus is either not visible at all or only seen as a sickle-shaped substance at their periphery. This is particularly the case with the cells which fill the smaller and larger cavities mentioned above and which are evidently undergoing a regressive metamorphosis (Fig. 4, right upper corner).

Not only the smaller bloodvessels, but also quite large ones are surrounded by a thick mantle of the cells of the tumor. This condition has in many places caused an enormous hyperplasia of the muscular cells of the bloodvessels, so as to make them appear in transverse sections like large vesicles. In other portions the tumor cells have penetrated into bloodvessels and consequently not only surround but also fill them.

Many of the nuclei of the tumor cells show unmistakable karyokinetic figures.

FIG. 5.

The round-cell infiltration usually accompanying malignant tumors is not wanting in the brain as well as in the dura mater (Fig. 5), and there are numerous foci of round-cell infiltration in the tumor tissue itself.

Having examined numerous sections of the tumor, dura mater and brain, I think the tumor is a most beautiful specimen of an endothelioma. Endotheliomata of the brain do not seem to have as yet been observed very frequently.

Bramwell (Intra-cranial Tumors, 1888, page 238), speaking of the alveolar sarcoma of the brain, says: "It has also been

described, and not infrequently, as endothelioma. On this view the cell nests arise by proliferation from endothelial cells. This certainly happens when masses of cells are found from the endothelial covering of the subarachnoid mesh-work of the pia mater; the masses afterwards group themselves into "nests." Sometimes the proliferous endothelial cells of the pia mater are aggregated into small spherical nodules of a peculiar lustrous appearance. The tumor into which the membrane is transformed then contains small, shining, pearly bodies made up of laminated layers of squamous or tubular cells. Such tumors have been called cholesteatomata or pearly tumors."

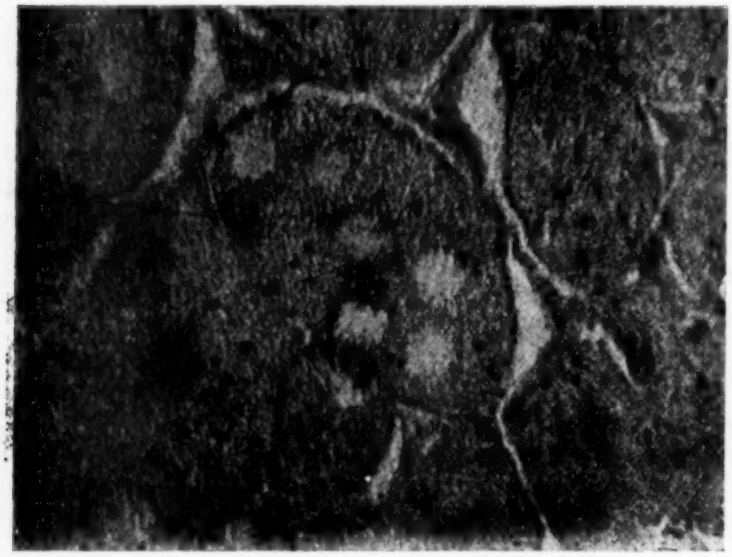

FIG. 6.

Drs. L. Bremer and N. B. Carson, of this city, published a case of "Cylindroma Endothelioides of the Dura Mater" in the *American Journal of the Medical Sciences*, February, 1895, which, where the tumor was well developed (see their Fig. 2) corresponds exactly with the one here under consideration. Dr. Bremer sees the origin of the tumor in his case in the endothelia of the bloodvessels.

What endothelial cells have given rise to our tumor, it is impossible to tell with certainty. Yet there are endothelial cells in the lymph- and bloodvessels in these tissues aside from those of the "subarachnoid mesh-work of the pia mater" which may serve as the starting point for an endothelioma. I am inclined to the belief that in our case the tumor started in the dura mater and probably in the endothelial cells of the lymph-sheaths of the bloodvessels. This at least seems to be suggested by its manner of growth.

The optic nerve of which I made a large number of transverse sections is atrophic throughout. Throughout its whole extent it contains a large number of round openings (Fig. 6) which at first look like empty cavities.[1] With high powers these usually perfectly round cavities, which give the nerve a sieve-like appearance, are seen to contain a slightly granular substance probably nerve tissue débris, and in a number of the sections this substance has taken on a light tint from the staining-fluid. These structures then appear like the round arenoid or colloid bodies in the brain, but they never take on as deep a tint. There are also some smaller colloid-like round bodies with a deeper stain, which may be traced for quite a distance, even into the nerve-fibre layer of the retina. As the deeply-stained bodies are throughout much smaller than the apparently empty or but lightly stained cavities, they do not seem to be identical. There are also a number of amyloid bodies situated in the pia mater and arachnoid sheaths.

The tumor has entered the orbit at its apex with the nerves and bloodvessels through the sphenoid fissure, but only to a small extent. Here it forms an apparently isolated nodule of the size of a split pea, which shows the same microscopical structure as the tumor does elsewhere.

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[1] In the supplementary number to Volume XXXIII of *Knapp's Archives* (German edition) on Table XVI, Fig. 5, Dr. A. Elschnig has given an illustration of this same condition in the optic nerve of an eye with glaucoma. The patient had died from a cerebral tumor. In describing the sieve-like appearance of the optic nerve, he states that he has never seen it in optic nerves from cases with cerebral tumors, but in glaucomatous eyes he has found this appearance of the optic nerve quite frequently. To this I wish to state, that in all my examinations, this is, as far as I remember, only the third case, in which I have seen this appearance of the optic nerve and none of these was a case of glaucoma. In all three cases the optic nerve was atrophic.

The dura mater sheath of the optic nerve has for quite an extent become agglutinated to the pia mater in consequence of a plastic inflammation which has led to the extensive new-formation of connective tissue. While in the transverse sections of this portion there is on one side this firm adhesion and obliteration of the inter-vaginal space, on the other, diametrically opposite side, the inter-vaginal space is considerably enlarged, and the trabeculæ which in the norm pass loosely from the one sheath to the other are very much stretched and many of them have been torn by the pressure of this apparently dropsical condition.

Quite unexpectedly I found that the anterior portion of the eyeball which, as stated, at some time previously to my receiving the specimen had been dry, was also the seat of pathological changes. Iris and crystalline lens are pressed forward, so as to be almost in contact with the posterior surface of the cornea. At first I thought the changes simply to be due to the drying up of the aqueous humor. On section, however, I found that a posterior synechia had at one time been formed, between the time of my seeing the patient and his death. This synechia was almost circular.

The cornea and conjunctiva are filled with round cells. In the coujunctiva this infiltration is especially marked around the bloodvessels. Descemet's endothelium is partly absent, partly proliferating. All along the inner surface of Descemet's membrane lie pigment granules some enclosed in cells, most of them free. Their origin seems to be the iris, as the tissue of this membrane is almost devoid of pigment, except in its retino-choroidal layer. Besides the common senile changes the tissue of the iris and ciliary body show an enormous round-cell infiltration. The cells of the retinal layer of the ciliary body in its pars nonplicata are beginning to proliferate. The periphery of the retina shows the well-known cystic degeneration. The choroid is apparently normal.

How and when this inflammation of the anterior part of the eyeball took place, I do not know.

QUININE AMBLYOPIA.

BY S. C. ARYES, M.D., CINCINNATI, OHIO.

THE following case of quinine amblyopia occurring in a girl 7 years of age, is of interest, as this profound influence of quinine is seldom witnessed. She had generally enjoyed good health, having suffered only from diseases incident to her age. For two weeks or more she had some increased temperature and it was feared she was threatened with typhoid fever, but the characteristics of this disease did not develop. Then she had an eruption of chicken-pox and during this time her temperature ran very high. Her physician gave her large doses of quinine for three days as follows: The first day 24 grains; the second day 56 grains, and the third day 26 grains. After the last dose she became unconscious and remained so for two or three days.

After return to consciousness it was observed that she was totally blind. This condition lasted for only a day when vision began slowly to return. For a while she complained of the room being dark when it was in fact quite light. Later on it was observed that her color sense was impaired. When examined by me two months after the above attack had occurred I found both optic discs pale and vision 0.6 in each eye. Color sense seemed to have returned and she had the appearance of being in good health.

She took in the space of three days 104 grains of quinine, quite a large amount for one of her age. It produced a profound influence on her brain as is evidenced by the unconsciousness for a period of two or three days. Unfortunately its influence on her hearing was not noted.

Dr. de Schweinitz, in the "Transactions of the American Ophthalmological Society," 1891, reports some very interesting experiments he made on the influence of quinine on dogs.

He found that injections of from one to four grains to the pound produced blindness in from three to fourteen hours, and one dog died from the effects of three grains to the pound.

The influence of the drug on the retina and optic nerve was very similar to that on human beings.

He gave some original plates showing the microscopic changes in the retina and optic nerve.

He says in *résumé* "that we have thickening and changes in the walls of the vessel (endo-vasculitis), organization of a clot, the result of thrombosis, widening of the infundibulum of the vessels as the result of the constriction of the surrounding nerve fibres, presenting appearances not unlike a glaucomatous excavation, and finally practically complete atrophy of the visual path including the optic nerves, optic chiasm, and optic tracts as far as could be traced."

ILLUMINATION OF THE JAVAL ASTIGMOMETER.

BY L. R. CULBERTSON, M.D., ZANESVILLE, OHIO,

OCULIST TO U. S. PENSION BUREAU FOR SOUTHEASTERN OHIO; OCULIST TO CITY HOSPITAL, B. Z. & C., AND C. & M. V. R. R., ETC.

I FIRST desire to call the attention of ophthalmologists to the fact that the fine black line on the mires of the Javal-Schiötz Ophthalmometer (model 1889) is too narrow for accurate work, even though the most brilliant light be reflected upon it. This line is only one millimeter wide and it is enough to make a difference of .5 D. in results found, owing to the spasm induced in the ciliary muscle of the operator in trying to adjust the instrument so that these two black lines will be continuous in the meridian of greatest or least curvature.

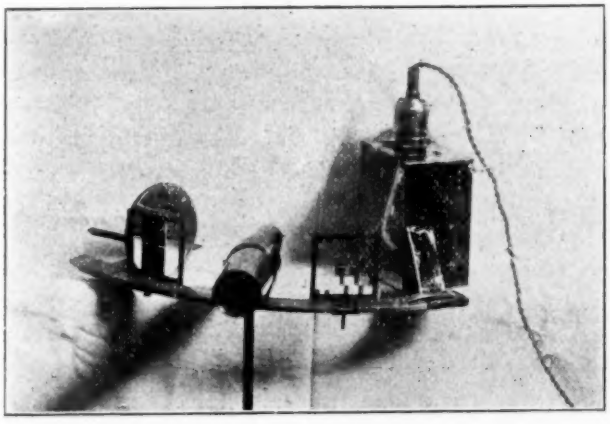
Several years ago the writer noticed errors from this cause in using the instrument and had a black line painted on each mire and running through its center which was 5 mm. wide. With this width and even a feeble illumination the mires could be quickly and accurately adjusted to the proper axes.

The Hardy instrument has a wide line (I do not remember its width) which makes it a very accurate instrument.

The writer has been using on his machine for a year an invention of Mr. John H. Culbertson which illuminates the mires brilliantly aud cheaply. It consists of an enameled

hood containing a 16 or 32 candle power electric incandescent lamp attached to a drop cord from the street circuit. This hood is screwed on the brass rotating bar and moves with it. This hood reflects part of the light onto the stepped mire and part to a concave mirror which is placed on the brass bar of the opposite side and from whence it is reflected onto the square mire. The one light will do the work of four, thus cheapening the cost of light by three-fourths. This is particularly desirable in places where they charge so much a month per light.

The following cut roughly illustrates the invention of J. H. Culbertson.



Wellsbach gas light gives a splendid illumination if parabolic reflectors are used, both light and reflectors being placed on the chin rest, as in the apparatus made by Fox and Strendicke, of New York.

CORRESPONDENCE.

TO THE MEMBERS OF THE MEDICAL PROFESSION.

Editor AMERICAN JOURNAL OF OPHTHALMOLOGY — I would be pleased to have an expression from you, either personally or through some medical journal, as to the relations of the lay-

publishing firms of medical journals and the profession. The request is suggested by the fact that Messrs. Wm. Wood and Company, of New York, refuse to permit the editors of "The American Year-Book of Medicine and Surgery" to use in our abstracts of Medical Progress articles and illustrations first printed in the *Medical Record*, and the *American Journal of Obstetrics*.

This decision seems to me to be wrong for the following reasons:

1. IT PREVENTS THE DISSEMINATION OF MEDICAL KNOWLEDGE. The Year-Book condenses, systematizes and criticizes the year's medical work in a shorter space and more permanent manner than the journals, and has thousands of readers no single journal can claim, or hope, to reach. Every physician writes and publishes articles in order that every member of the profession may, if possible, learn of his work, and that science and progress may thus be furthered and humanity benefited. To interfere with such dissemination of our literature in reputable publications is, I think, discourteous and unjust to the profession and an injury to Medical Science.

2. This injustice and injury to Medicine become all the more striking when physicians do not receive a cent of pay for contributions, from the publication of which the lay-publisher is supposed to make considerable financial profit.

3. No other publishers in the world, not even those who pay authors for their contributions, have in the least objected to our reproduction of quotations, abstracts, and illustrations from their journals.

Do you wish to limit the dissemination of your contributions to Medical Science by such an exclusion of them on the part of publishers from reputable publications? *Is this literature the property of yourself and of the profession or not?* Does your gift of it to a journal make it the private property of the publishers of that journal? Is it not rather a loan for temporary use only?

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Philadelphia, Pa., December, 1896. GEO. M. GOULD.

SOCIETY PROCEEDINGS.

REPORT OF THE SECTION OF OPHTHALMOLOGY, PAN-AMERICAN MEDICAL CONGRESS, HELD AT MEXICO CITY, NOVEMBER, 1896.

FROM NOTES KINDLY FURNISHED BY ROBERT SATTLER, M.D., CINCINNATI, OHIO.

The meeting of the Ophthalmological Section of the Pan-American Medical Congress, held in the City of Mexico, November 16, 17, 18 and 19, 1896, under the able and courteous direction of Dr. Jose Ramos, represented one of the most successful re-unions of Spanish-American and American ophthalmologists.

The attendance on the part of North American oculists was small, but the Spanish contingent from Mexico, Central America and South America was a large one.

The papers read by those in attendance excited active general interest and brought out many novel points of practical and scientific importance.

The discussions were carried on in Spanish and French. The President, Dr. Ramos, after a brief address of welcome to the members and assembled foreign colleagues, opened the work of the Section and outlined a provisional programme.

The Treatment of Burns of the Conjunctiva. By DR. D. C. BRYANT, Omaha, Neb., was the first paper read.

The treatment of these cases depends upon the amount of surface involved and consequently in this paper is divided into two distinct methods, the first used in the milder cases and the second in the more severe ones.

Many of the cases of burns of the conjunctiva seen in my own practice are produced by hot metals and are circumscribed in area. In these cases, as soon as the sloughing and separating of the dead tissue is completed, I pass a strabismus-hook

under the conjunctiva around the edge of the wound breaking up the loose connection between conjunctiva and eyeball to such an extent, as to allow the bringing together of the edges of the wound. The wound is then closed over by stitching the edges of the conjunctiva together with fine silk sutures and the case is treated as any ordinary wound of the conjunctiva would be.

The rapid healing of the ocular conjunctiva when thus treated, shuts out any possibility of that much-to-be-dreaded result, union between the ocular and palpebral surfaces.

The second method is employed in the cases where the burnt surface is so large as to prevent the use of the first method. This method consists in the early use of the skin-grafts, not waiting for the third stage as formerly recommended, but employed at the beginning of the second stage.

At the request of the President, Dr. Sattler gave first a brief synopsis of Dr. Bryant's paper in French and Dr. Redmond followed in Spanish.

DR. SATTLER opened the discussion (in English) and said that Dr. Bryant had presented a subject of great practical interest. His experience with burns of the conjunctiva had not been so favorable, except with those cases in which only the superficial layers were involved. In others in which the mucosa is destroyed, and in which sphacelation of its entire thickness and even of the submucous, episcleral and scleral tissue results, it has been rather uniformly unfavorable. This has been the case even in spite of careful separation and interposition of plates of rubber or ivory, the transplantation of mucous membrane from the mouth of the patient and of conjunctiva from the eyes of animals.

Symblepharon almost invariably resulted in such cases, which a subsequent plastic operation would only relieve imperfectly. He has never had any success with the transplantation of the other mucous membranes of man, or of the conjunctiva of dogs or rabbits.

DR. BRYANT stated, that he had tested this method and found it superior and giving better results than other methods of treatment.

Malignant Sarcoma of the Orbit. By ROBERT SATTLER, M.D., Cincinnati, Ohio, (in English).

At the President's request he gave a brief synopsis of it in French.

He emphasized the conclusion of his paper by saying that sarcomatous disease commencing as a sub-periosteal growth is one of the most malignant and dangerous neoplasms found in the orbit and that early adult life and childhood are the two periods of life during which it is most common. It is fortunately a rare disease. Equally dangerous are the glio-sarcomatous growths which start as intra-ocular neoplasms but rapidly become extra-ocular ones. They also grow with startling rapidity. Only one variety of malignant sarcoma, the encapsulated one, offers a chance that surgery may afford relief. All other varieties are hopeless and singularly fatal; more rapidly so with surgical or other interference, than without it.

The paper was discussed in Spanish by Drs. Ramos, Santos Fernandez and others.

In reply to the question from Dr. Fernandez: "Did I understand Dr. Sattler to say that this is a frequent disease in his country?" Dr. Sattler stated that fortunately it was not frequently met with, but by chance it had been his misfortune to meet with a number of such cases.

Observations With Respect to Orbital Osteo-Periostitis. By JUAN SANTOS FERNANDEZ, Havana, Cuba.

He related 28 cases of orbital periostitis which he had observed during a period of twenty-one years and in attending on 30,500 eye patients in a private clinic. In his ophthalmic practice he finds a smaller number of these cases of disease of the orbit, than is generally given as the proportion by other observers.

He recognizes the difficulty of diagnosing osteo-periostitis at the first glance and considers the disease as the final result of lymphatism or syphilis; the latter of the two being the easier cause to combat. The profession should, as soon as possible, arrive at the clear understanding of the etiology of this disease, as a syphilitic osteo-periostitis rapidly yields to treatment. The prolongation of the disease of the bones of the orbit and its propagation to the eyelids always gravely menaces the cornea and may cause loss of vision.

He thinks that orbital periostitis is only observed with more or less frequency amongst the very poor classes, who,

through want of timely care and good nursing, often lose their sight.

In his cases the infection never came from the frontal sinus, notwithstanding that fact that this is the starting point of many inflammations of orbital walls. He can designate as a more frequent point of origin the antrum of Highmore, through propagation from the dental alveoli. He has also seen the disease start from the nasal fossæ.

Through the relief obtained and the shortening of the process of osteo-periostitis, he recognizes the importance of the prompt expulsion of the secretions when caries is formed. In order to maintain this he recommends dilatation of the fistula by means of a stalk of laminaria digitata, which he allows to remain *in situ* up to twenty-four hours.

The author gave an account of 14 cases of autoplasty performed to restore either the upper or lower lid. Of the three methods of autoplasty, that of sliding the flap, that of employing the adjoining flap, and that of using a distant flap, he prefers the first two. He recognizes greater advantages in the first one, but also admits that the second one adapts itself well to many cases. Dermic grafts, he thinks, should be reserved for very special cases.

In order to succeed with blepharoplasty, he thinks it indispensable to give a perfect mobility to the free edge of the affected lid, when it is still in existence, in such a manner as to be able to close the two eyelids before the flap is applied. He believes in making blepharoplasty in two operations. In the first one he breaks the adhesions of the everted or contracted lid and closes the lids. In the second operation he applies the flap to the resulting solution of continuity. With respect to the flaps, he considers that the indications of the text-books specifying determined proceedings for general practice are not to be trusted, and that the region from which the flaps are to be taken and their form have to be adapted to the lesion and its configuration in each case.

He only recommends the use of the fronto-nasal flap (as coming from a very vascular region) for certain retractions or ectropium of the inner half of the lower eyelid; as, should any retraction take place in the flap, it would go from the lower to the upper part and would favor the suspension of the lower lid.

He considers, that blepharoplasty very seldom completely

satisfies the requirements of æsthetics, but it always tends to protect the eye and to prevent loss of sight.

The discussion, in which Dr. Sattler and others participated, showed that Dr. Fernandez' experience is at variance with that of North American and European surgeons.

In all cases of chronic caries with fistulous communications, a free exposure of the seat of the disease followed by the removal of all necrosed and carious bone suggests itself as an indispensible necessity. Little or nothing can in these cases be achieved by dilatation of the fistulous tracts, even though it be granted that better drainage be obtained. While he never found the frontal sinus to be the starting point of the disease, and considers the maxillary sinuses to be frequently its source, caries and necrosis of the orbital walls are in the United States very often found associated with and dependant upon pathological processes in the frontal sinus and the anterior and middle ethmoidal cells, while the lesions of the maxillary antrum are also frequent.

A contribution by Frank S. Milbury, M.D., of Brooklyn, N. Y., on *Insufficiency of the Ocular Muscles*, and one by Dr. Teofila A. Moret, of Buenos Ayres, were read by title.

The Treatment of Trachoma by Injections of Permanganate of Potassium Into the Fornix, and *Studies Concerning Some Palpebral Autoplasties.* Two papers (in Spanish). By Dr. Fernandez, Havana, Cuba.

In his contribution on the treatment of granular lids with injections of permanganate of potassium, Dr. Ferandez' large experience and researches have added another method of treatment for this always unmanagable and interminable affection. An objection to this method seems to be the severe pain which attends the injection. This may, however, be modified by cocaine.

Discussion in Spanish by Drs. Ramos, Chavez, Vertiz, Uribe, Froncosa and Sattler.

Enucleation of the Eyeball With Presentation of New Instruments. (Blunt-pointed curved scissors to detach the conjunctiva, single blunt-pointed curved scissors for taking up and cutting the muscles, and syringe for post-bulbar and

intra-orbital injections of cocaine). By DR. CHAVEZ, of Mexico City.

He resorts to cocaine by instillation and, after the muscles have been separated, he injects by the aid of the syringe he has devised a 2 per cent. solution of cocaine into the tissues behind the globe, so that the division of the optic nerve and other structures can be done without suffering. He has never seen toxic disturbances and has found the use of his new scissors of great advantage.

The paper was read in Spanish and English, the discussion took place in English and French.

DR. SATTLER stated that he always practiced the old Bonnet method and could readily see the advantage of the one new pair of scissors with the curved blunt point which serves the double purpose of a hook and cutting instrument The only objection he could see to it, is the difficulty of guiding and manipulating this combined hook and scissors with the thumb and fingers. We have had various devices of narrow blunt-pointed scissors, but Dr. Chavez, suggestion of having one blunt-pointed curved blade, as far as his knowledge goes, is new. It will enable the operator who practices the Bonnet method to dispense with the hook, and, if the Vienna method is practiced, it will facilitate the division of the tendons of the muscles. We are surely indebted to Dr. Chavez for this modification, as it will simplify further the technique of this operation. So far as the use of cocaine or local anæsthesia is concerned, and the intra-orbital and post-bulbar injection of it, Dr. Sattler confessed to certain misgivings as to its efficacy and he fears its danger. He has had two unpleasant experiences attending the deep and subconjunctival injection of cocaine in enucleation of the eye and prefers general anæsthesia, even with all its dangers, to the annoying, not to say dangerous, sequences which he has met with after cocaine injection in the cases referred to.

DR. CURRY, of Los Angeles, Cal., expressed his approval of the scissors presented by Dr. Chavez.

DR. RAMOS announced as a subject for discussion, *Hernia of the Iris after Cataract Extraction and Methods to Avoid This Complication.*

This called forth some remarks by Dr. Vertiz who thought

that his method of operating might avoid this complication as also the formation of secondary cataract.

A New Operation for Cataract. By DR. VERTIZ. Discussed in English French and Spanish.

DR. SATTLER said, he had been greatly interested in the novel and ingenious method of cataract extraction of Dr. Vertiz. It necessitated, however, a more complicated technique and inflicted a greater traumatism than the methods ordinarily practiced by ophthalmic surgeons entail. This objection, he feared, would probably prevent its adoption, even as a substitute in certain favorable cases, for other operative procedures which are at present in general favor are upheld by experience.

DR. RAMOS read an interesting communication (in Spanish) on *A Brief Study on Astigmatism in Mexico*, which was discussed by Drs. Chavez, Chæon, Montana, Fernandez, and others.

DR. CHAVEZ read an interesting *résumé* of the *Progress of Ophthalmology*.

DR. EMILIA F. MONTANA read a carefully prepared contribution on *Coreskiascopy*.

DR. REDMOND showed some beautiful pathological specimens.

DR. GEO. J. STEVENS' and DR. TANGEMAN'S papers were not read as these gentlemen were not present.

DR. URIBE TRONCOS opresented several photographs of a remarkable case of injury of the face and eyelids by a sabre cut. Extensive plastic operations with skin grafting were resorted to and an excellent result obtained.

After this the meeting adjourned and farewell remarks were made by Drs. Ramos, Santos Fernandez, Chavez, and finally Dr. Sattler closed the session with a few brief remarks, thanking Dr. Ramos and his colleagues for the many kindnesses extended and expressed the wish that an equally pleasant and profitable re-union might take place in Caracas, Venezuela, the meeting place of the next Pan-American Medical Congress.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Clinical Evening.

Edward Nettleship, F.R.C.S., President, in the Chair.

Thursday, December 10, 1896.

Superficial Choroido-Retinitis of Peculiar Form and Doubtful Causation. This case was shown by Messrs. Holthouse and Batten.

A young woman was first seen in October, 1896, with a history of slight dimness of sight of five weeks' duration. There were very numerous white rounded patches in the fundus, very closely scattered over the whole central region, including the yellow spot, some of them very minute, others about the size of the diameter of a retinal vessel. In many places several spots had coalesced forming larger areas. There was no pigmentation around them. Vision was $^{6}/_{IX}$ in each eye. There was no appearance or history of syphilis, congenital or acquired. She presented symptoms of marked Graves' disease. She was one of twenty-four children, twenty of whom had died in infancy of some cerebral disease. There had been no consanguity of parents, but the case suggested some nervous affection like retinitis pigmentosa. The condition had undergone no change to the present time.

Dr. James Taylor said, on the question of inheritance, that the girl was the offspring of a very prolific marriage; it was remarkable that in Friedreich's disease, and he believed also in Leber's disease, there was a common history of prolific marriages.

Sudden Failure of Vision in Both Eyes With Total Obstruction of Fundi in a Young Healthy Man. This case was shown by Dr. Batten.

A man aged 26, was engaged in moving hay in July, when he was seized with sudden giddiness and failure of vision. The

pupils were equal and active to light. In the right eye no view of the fundus could be obtained; there was a grey reflex only. In the left there was also much haze of vitreous, but some white patches could be seen in the fundus but not definitely located. At the present time in the right there was a large white patch in the macular region, and others in the periphery, probably choroidal; in the left some white patches could be seen. There was no history or appearance of syphilis; he was a robust healthy man; he had had no bleeding in other organs. The cause was probably a hæmorrhage brought on by stooping.

THE PRESIDENT thought it probably belonged to the group of large spontaneous hæmorrhages occurring in young adults, one feature of which was their liability to recur.

MR. GUNN thought the changes in the yellow spot were suggestive of deep retinitis of renal origin.

Essential Shrinking of the Conjunctiva, With a Bacteriological Examination. This case was shown by MR. A. QUARRY SILCOCK.

A girl, aged 8, was admitted to Moorfields Hospital on November 13, 1895, with conjunctivitis and infiltration of the cornea. The conjunctiva was extremely hyperæmic and generally œdematous; moist flattened papillary growths projected from the tarsi of both upper and lower lids; the right cornea was clear, the left infiltrated. There were sores and scabs about the anterior nares, and it was supposed that these had been the source of contagion for the eye. The left cornea perforated, and the eye was excised. On March 24, 1896, the patient was re-admitted. There was much thickening and shrinking of the conjunctiva; the lashes were inverted; there was some ulceration of the cornea. Early in May there was some obstruction to the air passages, and the patient coughed up a large hard mass of membranous exudation. By June 6, the left socket had become obliterated; the right cornea was opaque. The aim of treatment had been to disinfect the conjunctival sac, but it had not succeeded. At the present time the left socket was completely shrunken, and there was only a narrow opening between the lids; the right cornea was opaque, the conjunctiva contracted, and the V. = p. l. The case had been examined bacteriologically by Mr. Plimmer.

MR. PLIMMER said that the bacteriology of pemphigus was scattered but uniform; the same organism has been repeatedly found. The one gap in the chain was owing to the impossibility of making the organism grow on any animal's skin. The organism was a micrococcus which grew in pairs; it grew in serum or glycerine agar at incubator temperature. He had injected some of the fluid from one of the blisters on the skin in this case into the peritoneum of a mouse, which died of acute septicæmia; a guinea-pig died forty-eight hours after it was injected into the pleural cavity. A small drop was inserted into a rabbit's eye; after two days there was intense inflammation and discharge, the eye was more rapidly destroyed than with other septic organisms. The suppuration was not produced by a strepto- or staphylococcus, nor by any skin organism. It was identical with that which had been already found by other observers.

MR. MALCOLM MORRIS said that there was the greatest controversy now going on as to the nature of the disease producing bullæ. The cases in which the eye was involved differed from true pemphigus, so that it was not at all easy to be sure of the nature of this affection. He did not think it was a true pemphigus.

MR. DEVEREUX MARSHALL also spoke.

Retinal Detachment of Obscure Origin. This case was shown by MR. SILCOCK.

The patient was a boy, aged 10. When first seen early this year there was a localized detachment of the retina just outside the yellow spot, which steadily enlarged till August. Under an anæsthetic he punctured the swelling through the sclerotic at its summit, with the help of the ophthalmoscope; a choroidal reflex was seen through the rent so produced, and much fluid escaped. The rent closed, the fluid was reformed, and some separate areas of choroidal exudation were now seen. The eye was said to have been always defective. There was no history of injury.

MR. LAWFORD had had a case recently in which there was a large detachment of the retina of obscure origin; he had punctured it and let out serous fluid, but without result as regards the detachment.

THE PRESIDENT suggested retinitis proliferans as the probable nature of the affection.

MR. SILCOCK said that retinitis proliferans had been suggested by Mr. Holmes Spicer, who had first seen the case.

MR. HOLMES SPICER said the case presented many of the characters of retinitis proliferans, but the main central part of the attachment was very prominent and rounded; he thought the detachment might be caused by a cysticercus.

Cases and Specimens.

A specimen of "Melanotic Sarcoma of the Orbit" was shown by MR. R. WILLIAMS. The patient was a woman, aged 40; she had chronic irido-cyclitis, for which the eye was excised. Four or five years later the artificial eye which the patient wore began to squint inwards. It was found that there was a melanotic sarcoma growing from the optic foramen. It had probably originated from the choroid in the first place.

MR. LONG showed "Epithelioma of the Cornea and Conjunctiva in a Man."

MR. MARSHALL had examined a small piece of the growth (a white raised mass at the inner side of the cornea), but had found it inconclusive.

THE PRESIDENT thought it scarcely typical of epithelioma; it looked more like sodden epithelium.

DR. BRONNER showed a drawing of a case of "Coloboma Lentis" upwards and outwards in a man aged 35. There was no history of a blow; he thought it was probably due to some intra-uterine lesion.

MR. CRITCHETT had lately under his care a woman aged 38 who had double congenital coloboma of the iris, dislocation of both lenses and coloboma of the right lens.

MR. TREACHER COLLINS and MR. STOKER showed a case of "Corneal Ulcer Treated with Oxygen." The ulcer got well under the treatment. Mr. Stoker described the method, which consisted in passing equal parts of oxygen and purified air into a mask, which was first fitted over the eye, so that the eye remained exposed to the mixed gases. The mask was worn day and night.

MY. LAWFORD showed a case of "Embolism of the Central Retinal Artery." The patient was a man aged 37. The left eye failed suddenly.

DR. DOYNE showed a case of "Pigmented Growth of the Conjunctiva." A portion of the growth was removed. This was followed by increased pigmentation, which had since diminished.

MR. BICKERTON showed a "Combined Nasal Style and Probe."

MESSRS. CRITCHETT, ERNEST CLARKE, PRIESTLEY SMITH, and WILLIAMS and DOYNE also spoke.

DIABETIC IRITIS. HERSCHEL FISHER, M.D., Lebanon, O. (*Cincinnati Lancet-Clinic*, November 21, 1896).

On May 19, 1996, I was called to see the Rev. C. P., who complained of an increasing congestion of the conjunctiva due as he thought to smoke or dust of railway travel. The injection, lachrymation and slight photophobia suggested conjunctivitis and a careful search for a foreign body was instituted, but without result. Upon further questioning found that he was a victim of diabetes for a dozen years or more and that lately he had lost weight rapidly. This suggested further examination and close inspection showed a hazy, yellowish dis coloration of the iris and a cloudiness of the pupil. Vision of that eye was much impaired. The pupil was small and sluggish.

I instilled a weak solution of atropia and as there was no response the dose was doubled. Returning the next morning and finding that there was scarcely any dilatation of either pupil, I began dropping a 1 to 60 solution into both eyes every ten minutes. There had been a steady increase in the amount of exudation into the pupil, the photophobia was much more marked, vision greatly diminished and the right eye had become involved. The strong solution was used regularly every ten minutes for half an hour, and once or twice during the following half hour without marked effect on the pupils. Questioning confirmed the supposition that he had suffered from previous slight attacks and that there were firm posterior adhesions, the result of former inflammation. A test of the urine was made, and sugar was found in large but undetermined quantity. The specific gravity was then 1034. The treatment consisted in atropine and salines. He refused to take calomel which we thought would be beneficial. From that time until my last visit on May 26, he steadily improved until vision had returned to about the same degree he had enjoyed before this attack. A few days later coma set in, he sank rapidly and died without regaininig consciousness.

OPHTHALMIC DIGEST.

By J. ELLIS JENNINGS, M.D.,
of St. Louis, Mo.

SARCOMA OF THE CHOROID. A SERIES OF CASES. George F. Fiske, M.D. (*Journal of the American Medical Association*, October 17, 1896).

The author reports five cases of sarcoma of the choroid, of which two died, one certainly and the other probably as a result of a recurrence of the sarcoma in other parts of the body. The practical questions which present themselves are:

1. The question of early diagnosis between the separation of the retina and the separation of the retina which is caused by a tumor behind it.

2. The question as to whether enucleation shall be advised in cases where the diagnosis is not certain.

3. The importance and duty of assisting one another by giving to each patient, in all cases of doubt, *i. e.*, in almost all cases of ablatio retinæ, full notes and sketches for use when patients consult other specialists, which is usually the case.

First, as to diagnosis: This is often easy when the tumor can be seen, or where glaucomatous symptoms or inflammations of the ciliary body, have presented themselves, also where the separation follows extreme myopia, or a blow, or injury, or seasickness. Where the separation is slight and occurs in the upper half of the field, the tendency of the sub-retinal fluid to seek the lowest level will often assist the diagnosis, and in some cases drawing off the fluid with a hollow needle and syringe will clear up the doubt even though the separation is not cured by that means.

The importance of early diagnosis is greatly increased by the fact that these choroidal sarcomas almost always occur as primary and not as metastatic sarcomas. I have not found in the literature a single case of sarcoma or melano-sarcoma occurring as a metastasis following sarcoma in some other portion of the body. On the other hand, particularly in the case of melano-sarcoma, metastases in other parts of the body following the sarcoma in the eyeball are very frequent and fatal.

Second, as to indications for an operation in cases of doubt, I would suggest enucleation be advised where: (*a*) the vision is irrevocably destroyed and there is doubt as to the presence of a tumor; (*b*) where, though there is slight vision present, it is failing rapidly through extension of the separation, and there is no previous examination by colleagues, excluding the presence of a tumor, with no good reason for excluding it from the history of the case; (*c*) where glaucomatous symptoms show themselves or cyclitis or irido-cyclitis.

A CONTRIBUTION TO THE QUESTION OF REMOVAL OF THE LENS IN MYOPIA. HERBERT HARLAN, A.M., M.D., Baltimore, Md. (*Journal of the American Medical Association*, November 28, 1896).

Jno. Harvey, aged 32, a Welshman and laborer by occupation, had always been very short-sighted. He carried in his pocket a pair of — 13 D. glasses which he occasionally used for reading. By their help it was not necessary to hold the print so near his face. For distance, he said they were not much good. On January 8, he received a blow in the right eye, which, he said, had always been the better. Some hours later he came to me at the Presbyterian Eye and Ear Hospital. There was a bruise on the right cheek and eyelid and examination showed the lens still perfectly clear, dislocated into the anterior chamber. The upper edge was a little above the centre of the pupil and with the ophthalmoscope the fundus could be easily seen, either through the lens or above it, and by the indirect method, in one position, two images of the optic nerve could readily be seen, at the same time. There was some redness and pain. The left eye had high myopia with choroidal atrophies and very little vision. Removal of the lens was advised and the following day the operation was performed, a downward corneal section being made. There was some loss of vitreous but the healing process was uneventful. The iris was not touched at the time of operation, but at the present time is tucked down behind, as it were, though not adherent to the corneal wound. The appearance is as if there had been a large downward iridectomy done. On February 4, + 3.50 D. S. + 4.50 cyl. 165 gave $^{15}/_{XL}$ vision and 8 D. S. same cyl. enabled him to read No. 1 readily. On looking out of the

office window where a mild storm was in progress he remarked that it was the first time he had ever seen snow falling when on the inside of the house. The glasses indeed would indicate a much less degree of original myopia than — 13 D. the old glasses. Fukala, Pflueger, Von Hippel and others have noted the very high refractive power of the human lens in these cases.

The second is a case of accidental removal of a lens, in a child, with high myopia, resulting in good vision at the age of 45. Fellow eye at that time lost by choroidal atrophy.

Sister M., a cloistered nun, aged 45, stated that she had always used her right eye, but of late, she did not see well with this one and that the left, which had been injured, was now the better, but she could not read at all. I found the right had only a vision equal to the counting of fingers at eighteen inches. With the left V. $^{20}/_{L}$ and was slightly improved by plus lenses up to 2 D. The ophthalmoscope revealed in the right high myopia with extensive choroidal atrophies while in the left there was seen, behind the iris, an irregular opening through what was evidently the remnants of an opaque lens capsule. Further questioning brought out the fact that the injury was caused by a blow from the end of a stick and occurred at the age of 13 years.

It was then plain that there had been, at that time, a traumatic cataract, followed by absorption of the lens substance. There was no fundus trouble in this eye and 5 D. + enabled her to read "brilliant" at twelve inches.

So here was a case of accidental removal of a lens at 13 followed by good vision, $^{20}/_{L}$ without glasses, at 45, in this eye, while in the fellow, in which no attempt at correction by glasses, has ever been made, the myopia had probably increased, the choroid had atrophied and all useful vision had been lost. Would removal of this lens in childhood have saved this eye? The fact of about 2 D. of accommodation in an eye without a lens is of some interest. It is likely that a carefully adjusted glass would improve the given vision in the left eye, but I was obliged to see the patient at the nunnery and to use a candle for the ophthalmoscopic examination. The patient was apparently embarrassed and gave hesitating answers and no attempt was made to correct possible astigmatism.

BOOKS AND PAMPHLETS.

DISEASES OF THE EYE. A Hand-Book of Ophthalmic Practice for Students and Practitioners. By G. E. DE SCHWEINITZ, A.M., M.D. With 256 Illustrations and two Chromo-Lithographic Plates. Second Edition, Thoroughly Revised. Philadelphia: W. B. Saunders. 1896. Price, $4.00.

That this extremely practical hand-book of the well-known author has found the deserved favor with the public, is shown by the fact, that already a second edition has appeared. This new edition is enlarged by the addition of a number of new subjects, while others have in the revision been treated somewhat more extensively than in the first edition. This book is destined, it seems, to be one of the best known and most useful text-books.

PAMPHLETS.

"On Light," By Myles Standish, M.D.

"An Otological Convenience." By H. A. Alderton, M.D.

"Dr. Kroll's Orthoptic Exercises." By Ch. F. Prentice.

"Remarks on the Causes of Glaucoma." By Leartus Connor, M.D.

"The Treatment of Otorrhœa and Its Importance." By Edward B. Dench, M.D,

"La Strabométrie et L'Urgence de son Emploi." Par L. de Wecker et J. Masselon.

"Twenty-Seventh Annual Report of the New York Ophthalmic and Aural Institute."

"Excessive Hæmorrhage After Enucleation of the Eyeball." By Robert Sattler, M.D.

"The Field of Monocular Fixation and Its Relation to Heterophoria." By Casey A. Wood, M.D.

"The Diagnostic Importance of Double Optic Neuritis in Focal Lesions of the Nervous System." By Robert Sattler, M.D.

"The Upper-Tone Limit in the Normal and Diseased Ear, as Determined by the Galton Whistle." By H. A. Alderton, M.D.